BISS Biodiversity Information Science and Standards

Biodiversity Information Science and Standards 3: e37502
doi: 10.3897/biss.3.37502

OPEN ACCESS

Conference Abstract

DiSSCo as a New Regional Model for Scientific Collections in Europe

Wouter Addink[‡,§,|], Dimitrios Koureas[‡,|], Ana Casino Rubio[¶]

‡ Naturalis Biodiversity Center, Leiden, Netherlands
§ Species 2000 Secretariat, Leiden, Netherlands
| Distributed System of Scientific Collections - DiSSCo, Leiden, Netherlands
¶ CETAF c/o Royal Belgian Institute of Natural Sciences, Brussels, Belgium

Corresponding author: Wouter Addink (wouter.addink@naturalis.nl), Dimitrios Koureas (dimitris.koureas@naturalis.nl), Ana Casino Rubio (acasino@naturalsciences.be)

Received: 19 Jun 2019 | Published: 26 Jun 2019

Citation: Addink W, Koureas D, Rubio A (2019) DiSSCo as a New Regional Model for Scientific Collections in Europe. Biodiversity Information Science and Standards 3: e37502. https://doi.org/10.3897/biss.3.37502

Abstract

European Natural Science Collections (NSC) are part of the global natural and cultural capital and represent 80% of the world bio-and geo-diversity. Data derived from these collections underpin thousands of scholarly publications and official reports (used to support legislative and regulatory processes relating to health, food, security, sustainability and environmental change) and let to inventions and products that today play an important role in our bio-economy.

In the last decades, the research practice in natural sciences changed dramatically. Advances in digital, genomic and information technologies enable natural science collections to provide new insights but also ask for changing the current operational and business models of individual collections held at local natural history museums and universities. A new business model that provides unified access to collection objects and all scientific data derived from them. Although aggregating infrastructures like the Global Biodiversity Information Facility, GenBank and Catalogue of Life now successfully aggregate data on specific data classes, the landscape remains fragmented with limited capacity to bring together this information in a systematic and robust manner and with scattered access to the physical objects.

© Addink W et al. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

The Distributed System of Scientific Collections (DiSSCo) represents a pan-European initiative, and the largest ever agreement of natural science museums, to jointly address the fragmentation of European collections. DiSSCo is unifying European natural science collections into a coherent new research infrastructure, able to provide bio- and geo-diversity data at the scale, form and precision required by a multi-disciplinary user base in science. DiSSCo is harmonising digitisation, curation and publication processes and workflows across the scientific collections in Europe and enables linking of occurrence, genomic, chemical and morphological data classes as well as publications and experts to the physical object.

In this paper we will present the socio-cultural and governance aspects of this research infrastructure. DiSSCo is receiving political support from 11 countries in Europe and will gradually change its funding model from institutional to national funding, with temporary funding from the EC to support the preparation and development. Solutions to achieve large scale digitisation are currently designed in the EC funded ICEDIG project to underpin the future large scale digitisation carried out by the countries. Unified virtual (digitisation on demand) and transnational physical access to the collections is over the next four years being developed in the EC funded SYNTHESYS+ project.

The governance of DiSSCo is designed to gradually change from a steering committee composed of a few large natural history museums contributing in cash to initiate the development into a legal entity in which national consortia are represented, with a central coordination office for daily management. Each country individually decides how its entities (scientific collection facilities, research councils, governmental bodies) are organised in their national consortium. A stakeholder and user forum, Scientific Advisory Board and International Advisory Board will ensure that DiSSCo will be functional in enabling science across disciplines and within the international landscape of infrastructures.

Training and short scientific missions are being developed in the MOBILISE COST Action to build capacity in FAIR data production, publication and usage of scientific collection-derived data in Europe and to initiate the socio-cultural changes needed in the collection-holding institutes. A Helpdesk is being constructed in the SYNTHESYS+ and DiSSCo Prepare projects to further facilitate the use and scientific use cases have been collected in ICEDIG to develop and facilitate e-services tailored to scientific needs.

Keywords

DiSSCo, Europe, scientific collections, natural history, research infrastructures, RI, specimens

Presenting author

Wouter Addink

Presented at

Biodiversity_Next 2019